Authentic Leadership Extends beyond Work: A Multilevel Model of Work-Family Conflict and Enrichment

Susanne Braun [ab], and Karolina W. A. M. Nieberle [b, *]

[a] *Durham University Business School, Durham University, Durham, United Kingdom*

[b] *LMU Center for Leadership and People Management, Ludwig Maximilian University Munich, Munich, Germany*

Author note.

* Both authors contributed equally to this work. A previous version of this paper was presented at the 2016 Annual Meeting of the Academy of Management in Anaheim, California, and at the 2016 IWP Conference at the University of Sheffield, United Kingdom. We thank the conference participants and Richard H. Morgan for their helpful comments on this work. All correspondence should be addressed to Dr. Susanne Braun, Durham University Business School, Durham University, Mill Hill Lane, Durham, DH1 3LB, United Kingdom; phone: +44 191 33 45869; email: susanne.braun@durham.ac.uk

Abstract

Drawing on the work-home resources model, we develop a multilevel framework of individual and team perceptions of authentic leadership in relation to followers' work-family conflict (WFC) and enrichment (WFE). Our model suggests that authentic leadership buffers followers' WFC and drives their WFE. In addition, leaders' WFC and WFE are examined as moderators to test the boundary conditions of these relationships. We collected data from 33 leaders and 128 followers at two points of measurement and analyzed them with hierarchical linear modeling. At the individual level, authentic leadership related negatively to WFC and positively to WFE. At the team level, authentic leadership related positively to WFE, but not to WFC. Cross-level interactions indicated that leaders' WFC strengthens the relationship between authentic leadership and followers' WFC. These findings contribute to the theoretical understanding of authentic leadership as a resource at multiple levels in organizations and demonstrate its outcomes beyond work.

Keywords: Authentic leadership; Multilevel model; Work-family conflict; Work-family enrichment, Work-home resources model

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In the face of the blurred boundaries between work and private life domains, modern organizations are challenged to preserve and enhance the well-being of their employees (Fleetwood, 2007; Morganson, Litano, & O'Neill, 2014; Munn, 2013). Both, scholarly (Ilies, Morgeson, & Nahrgang, 2005; Macik-Frey, Quick, & Cooper, 2009) and practitioner (George, 2003) literature highlight the importance of authentic leadership. Scholars argue that authentic leadership, "extends well beyond bottom-line success" and thereby contributes to advancements "in the greater society by tackling public policy issues and addressing organizational and societal problems" (Avolio, Gardner, Walumbwa, Luthans, & May, 2004, p. 802).

We extend the current theoretical views on authentic leadership by positioning it as a resource at multiple levels in organizations that enables followers to better balance demands between their work and private lives. According to Brummelhuis and Bakker's (2012) work-home resources (WH-R) model, individuals can face demands at work, which drain resources in their private life domain (i.e., work-family conflict, WFC) or gain resources at work, which increase their resources in the private life domain (i.e., work-family enrichment, WFE). Hobfoll (1989) defined resources "as those objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions, or energies" (p. 516). We build on this theory to argue that authentic leaders possess key resources (e.g., confidence, optimism, resiliency; Luthans & Avolio, 2003), which allow authentic leadership to function as an individual-level social support resource and a team-level macro resource for followers.

Conceptually rooted in positive organizational behavior (Luthans, Luthans, Hodgetts, & Luthans, 2001), authentic leadership characterizes leaders who "know who they are, what they believe and value", and who, "act upon those values and beliefs while transparently interacting with others" (Avolio et al., 2004, p. 802). Authentic leadership is "an important organizational resource" (Laschinger & Fida, 2014, p. 20). Positive psychological resources are inherent qualities of authentic leaders (e.g., self-knowledge, self-concept clarity, self-transcendent values; Avolio & Gardner, 2005). Authentic leaders are "deeply aware of their values and beliefs, they are self-confident, genuine, reliable and trustworthy, and they focus on building followers' strengths" (Ilies et al., 2005, p. 374). Above and beyond leaders' own resources, authentic leadership represents a resource for followers as it "positively influences self-awareness and self-regulated positive behaviors on the part of both leaders and followers" (Ilies et al., 2005, p. 376). Authentic leaders interact with followers in ways that focus on "emphasizing people's strengths rather than weaknesses" (Laschinger & Fida, 2014, p. 20). They have been described "to be in tune with the needs of their followers" and "to play a protective role" against followers' resource losses (e.g., burnout; Laschinger & Fida, 2014, p. 21). These processes specifically revolve around three positive psychological capacities that authentic leaders instill in others (i.e., hope, trust, optimism; Avolio et al., 2004). Empirical evidence links authentic leadership positively to followers' psychological capital as well as to their psychological well-being (Clapp-Smith, Vogelgesang, & Avey, 2009; Rego, Sousa, Marques, & Cunha, 2012) and health (Macik-Frey et al., 2009) as well as negatively to burnout and stress (Laschinger, 2014; Laschinger & Fida, 2014; Laschinger, Wong, & Grau, 2013; Rahimnia & Sharifirad, 2014).

The resource-based view helps to position authentic leadership relative to other leadership constructs such as leader-member exchange (LMX), ethical leadership, and servant

leadership. LMX represents a relationship-based approach to leadership that focuses on the leader, the follower, and their dyadic relationship (Graen & Uhl-Bien, 1995). This unique focus on the leader-follower relationship explains many relevant outcomes (e.g., job performance, satisfaction, role conflict and clarity; Gerstner & Day, 1997). However, LMX does not delineate explicitly which resources leaders bring into the relationship. The dyadic view of LMX relations is also less suited to hypothesize how leaders function as macro resources at the team level. Ethical leadership applies a social learning perspective to leader-follower relationships (Brown, Treviño, & Harrison, 2005). Ethical leaders are a "key source of ethical guidance" (Brown et al., 2005, p. 117), demonstrating and reinforcing normatively appropriate ethical conduct. Ethical leadership and authentic leadership "share a common concern for a moral dimension of leadership" (Brown & Treviño, 2006, p. 595). Both leadership styles are likely to help followers when faced with moral dilemmas and ethical leadership may be seen as a resource in this specific domain (i.e., ethical decision-making). However, authentic leadership's core dimensions (e.g., self-awareness, relational transparency) provide followers with resources above and beyond ethical leadership (e.g., instrumental, informational, emotional or appraisal support; ten Brummelhuis & Bakker, 2012). Servant leadership also stresses personal integrity, but its core focus is on serving others (Liden, Wayne, Zhao, & Henderson, 2008). Servant leaders' priority of "serving others before oneself extends from the workplace to home and community" (Liden et al., 2008, p. 162). However, servant leadership establishes a serving culture through which followers are taught to prioritize the needs of others above one's own (Liden, Wayne, Liao, & Meuser, 2014). Authentic leadership emphasizes nurturing and protecting followers' resources.

Three important shortcomings stand out in the authentic leadership literature that we attempt to tackle with the current research. Firstly, despite the continuous increase of empirical

work on authentic leadership (Banks, McCauley, Gardner, & Guler, 2016; Gardner, Cogliser, Davis & Dickens, 2011; Hoch, Bommer, Dulebohn, & Wu, 2016), the outcome criteria remain curiously one-sided. Recent large-scale meta-analyses link authentic leadership to work outcomes such as follower satisfaction and satisfaction with their leader, task performance, and leader effectiveness (Banks et al., 2016), as well to work-related behavioral outcomes (job performance, OCB, deviance), attitudinal outcomes (employee engagement, job satisfaction, affective commitment, organizational commitment), and relational perceptions (trust, leader-member exchange; Hoch et al., 2016). Yet, the question of whether authentic leadership affects attitudes and behaviors beyond the workplace has been largely ignored. This gap in the research is problematic given that organizations are struggling to enhance employees' health and well-being (Fleetwood, 2007; Morganson et al., 2014; Munn, 2013).

Authentic leadership compared to other positive forms of leadership "reflects a more diffuse focus beyond performance" (Banks et al., 2016, p. 643). It is likely to influence outcomes beyond work as "authenticity has a substantial influence on how one lives one's life" (Ilies et al, 2005, p. 374). Therefore, we aim to examine the importance of authentic leadership as a resource for followers at the work-family interface and test its potential to buffer *resource losses* in the form of WFC (Carlson, Kacmar, & Williams, 2000; Greenhaus & Beutell, 1985) as well as to promote *resource gains* at work, which in turn affects the private life domain in beneficial ways, that is, WFE (Carlson, Kacmar, Wayne, & Grzywacz, 2006; Greenhaus & Powell, 2006).

Secondly, authentic leadership has been defined as a multilevel construct (Avolio & Gardner, 2005; Cooper, Scandura, & Schriesheim, 2005). However, a review of conceptual articles revealed that only 10 out of 23 publications explicitly represented authentic leadership as a multilevel phenomenon, while 10 implicitly characterized it at the individual level only

(Yammarino, Dionne, Schriesheim, & Dansereau, 2008). This conceptual ambiguity is problematic because "only by fully incorporating levels of analysis, in theory, measurement, data analysis, and inference drawing can a more integrative and testable theory of AL [authentic leadership] result" (Yammarino et al., 2008, p. 695). Moreover, from a practical standpoint, modern organizations require leaders "to lead and motivate not only individuals but also teams as a whole" (Chen, Kirkman, Kanfer, Allen, & Rosen, 2007, p. 331). Leaders may differ in how they lead their team as an entity and also adapt their leadership to individual team members.

Recent evidence supports the view of authentic leadership as a multilevel construct (Hannah, Walumbwa, & Fry, 2011; Hmieleski, Cole, & Baron, 2012; Leroy, Anseel, Gardner, & Sels, 2015). Accordingly, we test the links between individuals' and teams' shared perceptions of authentic leadership and followers' individual experiences of WFC and WFE. This approach differentiates between idiosyncratic follower perceptions of their leaders' authentic leadership and followers' shared perceptions within one team (Leroy et al., 2015). We concur with the view of the team as a meaningful entity (Mathieu, Tannenbaum, Donsbach, & Allinger, 2014), arguing that authentic leadership strengthens perceptual consensus of individuals in teams (Kozlowski & Ilgen, 2006). We explicitly conceptualize teams' shared perceptions of authentic leadership as an emergent construct (Chen, Mathieu, & Bliese, 2004; Kozlowski, Chao, Grand, Braun, & Kuljanin, 2016). Emergent constructs "originate at the individual level and are subsequently aggregated up (or "emerge") to the group or organizational levels" (Chen et al., 2004, p. 274f.). We suggest that a consensus measure is best suited to capture teams' shared perceptions of authentic leadership (Chen et al., 2004). Specifically, we refer to a compositional model (Klein & Kozlowski, 2000) in which "each lower level entity implicitly and equally contributes to the higher-level index in a fairly straightforward manner" (Mathieu & Chen, 2011, p. 618).

Subsequent findings provide insights into the predictive potential of authentic leadership as a shared team property (Klein, Conn, Smith, & Sorra, 2001; Klein, Dansereau, & Hall, 1994).

Thirdly, previous theory and research predominantly focused on a variety of outcomes and mediating processes of authentic leadership (Gardner et al., 2011). This work neglected the conditions under which authentic leadership can be effective, part of which we suggest are authentic leaders' own resources (Ilies et al., 2005; Toor & Ofori, 2009). This gap in the literature is startling given "the central focus of AL [authentic leadership] on enabling both leaders and their followers to stay true to their values, identity, emotions, motives, and goals" (Banks et al., 2016, p. 643). While work-family literature also largely refrained from considering leaders' own challenges (O'Neill et al., 2009), initial empirical evidence supports the notion that work-family issues can be transferred between leaders and followers (Carlson, Fergueson, Kacmar, Grzywacz, & Whitten, 2011; ten Brummelhuis, Haar, & Roche, 2014). Our study addresses this gap in the literature by considering leaders' own WFC and WFE as moderators, which we assume fuel the relationships of authentic leadership with followers' WFC and WFE.

In summary, this research seeks to contribute to the extant literature in several ways. We build a theoretical model that extends current views of authentic leadership as a predictor of important outcomes beyond the workplace. Authentic leadership is proposed as a resource for followers that buffers WFC and drives WFE. We test whether leaders' WFC and WFE strengthens these relationships. Finally, we incorporate multilevel views, testing individuals' and teams' shared perceptions of authentic leadership as well as cross-level interactions.

Figure 1 summarizes our research model.

Insert Figure 1 about here

Theory and Hypotheses

Authentic Leadership

Authenticity in the concept of authentic leadership goes beyond the idea of 'being true to oneself'. The modern understanding of authenticity derives from humanistic psychology, grounded in works of Rogers (1961) and Maslow (1962). Kernis (2003) describes authenticity as "reflecting the unobscured operation of one's true, or core, self in one's daily enterprise" (p. 13). Authentic functioning derives from an awareness of one's personal thoughts, feelings, desires, strengths and weaknesses, the unbiased processing of self-relevant information, actions in accordance with personal values, beliefs, and needs rather than as a consequence of reward, punishment or to satisfy others, as well as a relational orientation in the sense of being genuine and real in one's close relationships without the fear of rejection (Kernis, 2003).

Authentic functioning has been transferred into the context of organizations to describe how leaders interact with followers (Avolio & Gardner, 2005). Leroy et al. (2015) characterize authentic leadership as "a context-specific (work-related) and role-specific (leader) manifestation of authentic functioning" (p. 1680). Authentic leadership expands the concept of authentic functioning since it represents "a process of influence […] also aimed at the development of followers" (Leroy et al., 2015, p. 1680). According to Walumbwa, Avolio, Gardner, Wernsing, and Peterson (2008), authentic leaders contribute to the positive self-development of their followers through "a pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate" (p. 94). Thus, authentic leadership builds on leaders' personal resources (Luthans & Avolio, 2003), such as their confidence, hopefulness, optimism, resilience, and high moral character (Avolio et al., 2004). Authentic leaders also possess high levels of self-awareness and self-regulation (Avolio & Gardner, 2005). Their

actions are "guided by the qualities of the heart, passion, and compassion as they are by qualities of the mind" (Avolio et al., 2004, p. 806).

In the following, we argue based on the WH-R model (ten Brummelhuis & Bakker, 2012) that authentic leaders possess these positive qualities (key resources), allowing authentic leadership to function as a social support resource for individual followers and as a macro resource for teams in organizations. We assume that authentic leadership supports followers by buffering resource losses at work, which would affect private life negatively (WFC), and promoting resource gains, which affect private life in beneficial ways (WFE).

The WH-R Model

Ten Brummelhuis and Bakker (2012) developed the WH-R model to provide an integrative conceptual framework that depicts WFC and WFE as processes of resource losses and resource gains. To explain how the WH-R model may help understand authentic leadership as a resource at the work-family interface, we provide an overview of its focal assumptions. A central pillar of the WH-R model is the conservation of resources theory (COR; Hobfoll, 1989, 2002). According to COR, individuals "strive to retain, protect, and build resources and that what is threatening to them is the potential or actual loss of these valued resources" (Hobfoll, 1989, p. 516). Resources represent "those objects, personal characteristics, conditions or energies that are valued by the individual" or that serve as means for their attainment (Hobfoll, 1989, p. 516). Resources can undergo loss spirals, in which "people expend resources to address the presence of a stressor" (ten Brummelhuis & Bakker, 2012). This occurs in the face of demands, which can be quantitative, emotional, physical or cognitive (Bakker & Demerouti, 2007).

The WH-R model applies these assumptions to work and private life domains. On the one hand, the model suggests that conflict ensues when individuals face demands in one domain,

which consequently drains their resources in the other domain. For example, when employees are faced with important, but difficult tasks, they are likely to spend more time at work. They use this resource (time) on work at the expense of time with their families, and with likely negative consequences (e.g., marital conflict). On the other hand, the WH-R model suggests that enrichment occurs through resources gain, that is, when resources in one domain increase resources in the other domain, which in turn can be utilized to generate further positive outcomes. For example, employees can draw on authentic leadership to gain motivation (willpower) and guidance (waypower) (Avolio et al., 2004).

The WH-R model examines resources along two dimensions: first, the source or origin of a resource, that is, *contextual* (i.e., located in social contexts) or *personal* (i.e., located within the self), and second, the extent to which a resource is transient, that is, *volatile* (i.e., fleeting or temporal) or *structural* (i.e., durable; ten Brummelhuis & Bakker, 2012). Combining these two axes results in four categories of resources: (1) structural and contextual objects/conditions (e.g., employment, marriage), (2) structural and personal constructive resources (e.g., skills, health), (3) volatile and personal energies (e.g., mood, time), and (4) volatile and contextual social support (e.g., advice, help). The latter category includes "instrumental, informational, emotional, and appraisal support" (ten Brummelhuis & Bakker, 2012, p. 548) that individuals receive from other people they have a close relationship with in their social environments such as leaders.

Beyond these four categories of resources, ten Brummelhuis and Bakker (2012) consider the impact of *macro resources* and *key resources*, both of which are "management resources that facilitate the selection, alteration, and implementation of other resources" (ten Brummelhuis & Bakker, 2012, p. 548). Examples of key resources include individuals' self-efficacy, self-esteem, optimism, social power and status. Macro resources pertain to characteristics of the larger system

(e.g., culture). Key resources and macro resources are said to "prevent and attenuate work-home conflict while simultaneously fostering work-home enrichment" (ten Brummelhuis & Bakker, 2012, p. 551). We build on this view to argue that authentic leaders possess key resources (e.g., confidence, optimism, resiliency; Luthans & Avolio, 2003). Building on these resources, authentic leadership functions as an individual-level social support resource for followers at the work-family interface. We also introduce authentic leadership as a higher-level facilitator, that is, a macro resource operating at the team level to support followers at the work-family interface.

Authentic Leadership and Followers' WFC

According to the WH-R model, WFC occurs as "a process whereby demands in one domain deplete personal resources, resulting in diminished outcomes in the other domain" (ten Brummelhuis & Bakker, 2012, p. 549). WFC relates to undesirable outcomes such as decreased physical and mental health (Beutell & Wittig-Berman, 2008; Gareis, Barnett, Ertel, & Berkman, 2009), general life stress (Parasuraman, Purohit, & Godshalk, 1996), and low levels of job, life, and leisure satisfaction (Allen, Hersi, Bruck, & Sutton, 2000).

Our research is concerned with the question of how authentic leadership relates to followers' resource losses or gains at work, which in turn relates negatively or positively to follower's private lives (i.e., WFC and WFE). We acknowledge that the reverse processes may be possible (i.e., resources loss in the private life domain affects work negatively, termed family-work conflict (FWC), or resources gain in the private life domain affects work positively, termed family-work enrichment (FWE); Grzywacz & Marks, 2000). However, since authentic leadership is a variable in the work context, we assume that it directly relates to followers' resource losses at work, which then relates to followers' resources in their private lives. This assumption is in line with meta-analytic results (Byron, 2005) suggesting that work-related

variables (e.g., hours spent at work, job stress, supervisor support) are stronger predictors of WFC, while non-work factors (e.g., marital status, the number of children) predict FWC better.

A meta-analytic review of Michel, Kotrba, Mitchelson, Clark, and Baltes (2011) underpinned the argument that work role stressors (e.g., time demands) and a lack of social support from coworkers, supervisors, and organizations fuel employees' WFC. Ilies et al. (2007) revealed that perceptions of workload predict WFC when controlling for the actual hours spent at work. Abusive supervision is a positive antecedent to WFC, while managerial support predicts it negatively (Carlson, Ferguson, Hunter, & Whitten, 2012; Cinamon & Rich, 2009).

Authentic leadership at the individual level and WFC. In line with the above-stated findings and the WH-R model, we propose that individuals' perceptions of the extent to which their leader displays authentic leadership relates negatively to their WFC. In this regard, authentic leadership concerns perceptions of the behavioral style that one leader displays in interactions with one follower (i.e., the individual level of analysis).

The theoretical framework of the influence process of authentic leadership developed by Avolio et al. (2004) revolves around three positive psychological capacities that authentic leaders possess and instill in others, hope, trust and optimism. Hope derives from a motivational state of agency and sense of self-efficacy. Authentic leaders "can enhance followers' hope by establishing not only their willpower, but also by including in their comments positive aspects of the waypower or directions to pursue that enhance a follower's sense of self-efficacy" (Avolio et al., 2004, p. 809). Authentic leaders further possess the necessary characteristics to foster others' trust in them, that is, ability, benevolence, and integrity. Finally, authentic leadership enhances followers' optimism through identification and positive emotions (Avolio et al., 2004).

Authentic leadership operating as a social support resource for followers can be based on instrumental, informational, emotional or appraisal support (ten Brummelhuis & Bakker, 2012). For example, in the face of external pressures, authentic leaders are guided by the desire to do what is right and fair (May, Chan, Hodges, & Avolio, 2003), communicate and act upon their fundamental values to shape an environment in which followers can be authentic (Avolio & Gardner, 2005; Leroy et al., 2015), and establish stable, trustful relationships (Clapp-Smith et al., 2009; Peus, Wesche, Streicher, Braun, & Frey, 2012).

Followers profit from this social support through authentic leadership, which we assume buffers resource losses in the face of work demands. Specifically, WFC occurs when demands in the work domain deplete followers' resources in the private life domain. By providing followers with different types of social support (e.g., emotional support when authentic leaders give room to speak openly about conflicting demands at the work-family interface), followers' resources at work are less likely to be depleted. What then follows is that even in the face of significant work demands, followers of authentic leaders feel that the social support stemming from their leaders prevents negative, conflicting experiences between work and private life domains. In sum, we assume that authentic leadership is a resource to buffer followers' WFC.

Hypothesis 1a. Individual perceptions of authentic leadership are negatively related to followers' WFC.

Authentic leadership at the team level and WFC. Walumbwa et al. (2008) defined authentic leadership as an individual-level construct, but did not "rule out the potential for dyadic, group, or organizational levels of analysis for a type of "collective" authentic leadership in the future" (p. 119). Yammarino et al. (2008) suggest that team processes such as cohesion,

communication, and shared mental model development create shared expectations of authentic leadership. Authentic leadership at multiple organizational levels has been said to develop through a cascading process, in which leaders and followers portray authenticity "to leaders, colleagues, customers and other interested stakeholders […], which over time may become a basis for the organization's culture." (Avolio et al., 2004, p. 806). Subsequently, we conceptualize teams' shared perceptions of authentic leadership as emergent, meaning a "process by which lower level system elements interact and through those dynamics create phenomena that manifest at a higher level of the system" (Kozlowski & Chao, 2012, p. 335). Prior research demonstrates the value of authentic leadership as a multilevel construct (Hannah et al., 2011; Hmieleski et al., 2012; Leroy et al., 2015). It suggests that authentic leadership at team levels "reflects the extent to which followers agree that their leader interacts with them in an authentic fashion", and that in this way "authentic leadership will benefit all followers in a work unit in a similar fashion" (Leroy et al, 2015, p. 1683).

Following the principle of composition, we propose that authentic leadership at the team level emerges from "convergent processes that yield isomorphic, parallel constructs across levels" (Kozlowski & Chao, 2012, p. 340). Thus, we concur with the view that authentic leadership as teams' shared perception "differs in structure but not in function from its individual-level parent construct", and therefore "performs the same theoretical function across different levels of analysis" (Hmieleski et al., 2012, p. 1479). This conceptualization aligns with authentic leadership as a shared team property, originating in "experiences, attitudes, perceptions, values, cognitions, or behaviors that are held in common by the members of a team" (Klein & Kozlowski, 2000, p. 215). Recent research supports this notion, demonstrating that leaders who champion collective rather than personal interests are more likely to be perceived as

authentic (Steffens, Mols, Haslam, & Okimoto, 2016). Moreover, consistent behavior according to one's values and beliefs (Avolio et al., 2004; Avolio & Gardner, 2005) lies at the heart of authentic leadership. Therefore, we suggest that authentic leadership creates a perceptual consensus of individuals in teams (Kozlowski & Ilgen, 2006).

We further suggest that teams' shared perceptions of authentic leadership represent a macro resource (ten Brummelhuis & Bakker, 2012) by shaping a higher-level team culture (i.e., interpretations and collective response tendencies; Hmieleski et al., 2012) in the face of work demands that threaten followers' personal resources in the private life domain. Assuming that teams' shared perceptions of authentic leadership function similarly to its individual-level parent construct (Hmieleski et al., 2012), team-level authentic leadership should also protect followers from resource losses in the face of work demands.

Followers profit from the macro resource of authentic leadership, which we assume buffers resource losses in the face of work demands. When team members learn and share that they can rely on the social support provided by authentic leaders (e.g., speak openly about conflicting demands at the work-family interface), a supportive team culture arises and followers' resources at work are less likely to be depleted. Even in the face of significant work demands, teams led by authentic leaders should feel that this supportive culture prevents negative, conflicting experiences between work and private life domains. Hence, teams' shared perceptions of authentic leadership are assumed to be an additional resource above and beyond individual-level relations with one's leader to buffer followers' WFC.

Hypothesis 1b. Team perceptions of authentic leadership are negatively related to followers' WFC.

Authentic Leadership and Followers' WFE

Engagement at work can have positive consequences for one's private life (Greenhaus & Powell, 2006; Wayne, Grzywacz, Carlson, & Kacmar, 2007). WFE and WFC are not two ends of the same continuum. Individuals may experience WFE and WFC at the same time (Wadsworth & Owens, 2007). WFE and WFC also have distinct antecedents and outcomes (Frone, 2003; Powell & Greenhaus, 2006). The WH-R model defines WFE as a process whereby personal resources at work accumulate, facilitating desirable outcomes in the private life domain (ten Brummelhuis & Bakker, 2012). Desirable outcomes in the private life domain comprise of: attitudes (e.g., positive relationships with family members and friends, life satisfaction), behaviors (e.g., availability for family members, accountability), and production outcomes (e.g., efficient performance of household chores, realizing personal leisure targets; ten Brummelhuis & Bakker, 2012). Followers who feel supported at work reinvest resources in the private life domain to better accommodate needs and wishes of close others (e.g., children, spouse, friends).

Carlson et al. (2006) highlighted the concept of resource acquisition through individual (e.g. self-efficacy, confidence) and environmental (e.g., support, networks) factors. Previous research demonstrated that high-quality relationships between leaders and followers predicted WFE through the perceived meaningfulness of work (Tummers & Bronkhorst, 2014) and through organizational identification (Zhang, Kwan, Everett, & Jian, 2012).

Authentic leadership at the individual level and WFE. We propose that individuals' perceptions of the extent to which their leader displays authentic leadership relate positively to their WFE. Again, authentic leadership concerns individual perceptions of the behavioral style that one leader displays in interactions with one follower (i.e., the individual level of analysis).

Authentic leadership has resource generating functions and thereby contributes to followers' WFE. Authentic leadership fosters other individuals' optimism and hope at work

(Aryee, Srinivas, & Tan, 2005; Rego, Marques, & Cunha, 2014). It creates resources that enrich followers' private life domains. Authentic leaders encourage followers' authenticity (Leroy et al., 2015), build stable, trusting relationships (Clapp-Smith et al., 2009; Wang & Hsieh, 2013), and provide followers with a sense of empowerment (Laschinger, Wong, & Grau, 2013).

Followers profit from social support through authentic leadership, which we assume drives resource gains at work. Specifically, WFE occurs when resources in the work domain nurture followers' resources in the private life domain. By providing followers with different types of social support (e.g., instrumental support when authentic leaders help followers learn how to express deeply held values) followers' resources at work are more likely to increase. As a result, followers of authentic leaders feel that the social support stemming from their leaders promotes positive, growth-related experiences in the private life domain (e.g., bonding with one's spouse). In sum, we assume that authentic leadership is a resource for followers' WFE.

Hypothesis 2a. Individual perceptions of authentic leadership are positively related to followers' WFE.

Authentic leadership at the team level and WFE. As detailed above, we build on previous theory and research considering authentic leadership as a team-level construct (Hannah et al., 2011; Hmieleski et al., 2012; Leroy et al., 2015; Steffens et al., 2016; Yammarino et al., 2008). Teams' shared perceptions of authentic leadership represent follower agreement (Klein & Kozlowski, 2000; Kozlowski & Ilgen, 2006), that is, seeing one's leader as interacting with the team in an authentic fashion and benefiting from this authenticity in similar ways within the team. Since authentic leadership as a shared team property should perform similarly as its individual-level parent construct, it can be an additional macro resource that promotes followers'

resources gain at the work-family interface (ten Brummelhuis & Bakker, 2012). Beyond their one-on-one relations with an authentic leader, the team-level agreement should shape a higher-level team culture in which followers feel supported to extend their own resources to successfully pursue their roles and responsibilities in their private life domain.

Followers profit from the macro resource of authentic leadership, which we assume nurtures resource gains at work. When team members develop a shared understanding that they can learn from their leaders (e.g., how to express deeply held values), a supportive team culture develops and followers' resources at work are more likely to increase. Teams led by authentic leaders should feel that this supportive culture promotes positive, growth-related experiences in the private life domain. Hence, teams' shared perceptions of authentic leadership are assumed to be an additional resource above and beyond individual-level relations with one's leader for followers' WFE.

Hypothesis 2b. Team perceptions of authentic leadership are positively related to followers' WFE.

Leaders' WFC and WFE

Leaders are prone to experience conflict and enrichment between their work and personal life domains (Carlson et al., 2011; O'Neill et al., 2009; ten Brummelhuis et al., 2014; Toor & Ofori, 2009). Recent research indicates that leaders' FWC and FWE indirectly impact followers' well-being (i.e., burnout, engagement) through the transfer of emotions (ten Brummelhuis et al., 2014). In line with the WH-R model, we have argued that authentic leaders possess key resources, which in turn enable them to function as social support resources for their followers. At the same time, "how one lives one's life" plays a key role in authentic leadership (Ilies et al., 2005, p. 374). Authentic leaders transparently act upon their deeply held values and authentic

leadership exerts its influence through "self-expressive acts" (Shamir & Eilam, 2005, p. 396). As Shamir and Eilam (2005) detail, authentic leaders personalize their values and convictions "through their lived experiences, experienced emotions, and an active process of reflection on these experiences and emotions" (p. 397). Followers use information about leaders' life-stories to infer their authenticity (Weischer, Weibler, & Petersen, 2013). Hence, we conclude that authentic leaders' experiences at the work-family interface represent a crucial element of what these leaders convey to their followers. Therefore, we assume that leaders' WFC and WFE represent boundary conditions for the relations between authentic leadership and followers' WFC and WFE.

We conclude that leaders will be best able to buffer followers' WFC when their own resource losses at the work-family interface are limited. Given that authentic leaders are "prominent behavioural role models for followers" (Ilies et al., 2005, p. 385), the alignment between their own and their followers' experiences should further increase their credibility. That is, when authentic leaders make their key resources available to support followers, the relationship should be more pronounced when leaders themselves are successful in handling demands (i.e., low levels of WFC). Therefore, we expect that the negative relationship between authentic leadership and followers' WFC will be more pronounced for low versus high levels of leaders' WFC.

Hypothesis 3. Leaders' WFC moderates the negative relationship between individual perceptions of authentic leadership and followers' WFC.

Similarly, the positive relationship between authentic leadership and followers' WFE should be reinforced when leaders themselves profit from WFE. When authentic leaders use their

key resources for social support, their leadership style should be more strongly linked to followers' WFE when leaders themselves are successful in building these resources. For example, when authentic leaders are able to build strong positive relationships with their families, are responsive to family needs, and succeed in achieving leisure targets, they will transparently communicate these achievements and express genuine positive emotions (e.g., pride, happiness; Gardner, Fischer, & Hunt, 2009). This transparency strengthens their impact as positive role models at the work-family interface. That is, the positive association of authentic leadership with followers' WFE should be more pronounced when leaders themselves are successful in using their personal resources from work to enrich their private lives (i.e., high levels of WFE). Therefore, we expect that the positive relationship between authentic leadership and followers' WFE will be more pronounced for high versus low levels of leaders' WFE.

Hypothesis 4. Leaders' WFE moderates the positive relationship between individual perceptions of authentic leadership and followers' WFE.

Method

Participants and Procedure

Data for this study was collected from 128 followers and their 33 leaders with an average number of 3.9 followers per leader (*SD* = 1.9, ranging from 2 to 12 followers). Teams with a minimum of two followers per leader were included in the analysis (the final sample contains 10 teams with 2 followers). We administered online surveys at two points of measurement. We collected data from leaders at the first point of measurement and data from followers at both points of measurement, separated by approximately seven weeks on average to reduce biases pertaining to data collection methods (Podsakoff, MacKenzie, & Podsakoff, 2012). At the first

point of measurement, we assessed leader ratings of their own experiences of WFC and WFE as well as their psychological well-being. Furthermore, at the first point of measurement, followers rated their leader's authentic leadership style, daily interaction time with the leader, and overall time period of working under this leader. At the second point of measurement, followers rated their own experiences of WFC and WFE and psychological well-being.

From an initial sample of 37 surveyed teams, we excluded four teams where only one follower had answered the surveys. From the resulting 33 teams, we excluded 68 followers who participated solely at one point of measurement (i.e., 47 followers, who participated only at the first point of measurement, and 21 followers, who participated only at the second point of measurement).[1] Thirty-three percent of the resulting teams were recruited through collaboration with a German automotive company. We also recruited leaders via a social network platform.

The final sample consisted of 48.4% female and 46.1% male followers (5.5% missing). The majority of followers were between 25 and 44 years old (52.3%). The final leader sample consisted of 72.7% male and 24.2% female leaders (3% missing). The majority of leaders were between 35 and 54 years old (59.6%). Participating teams worked mainly in the automotive (33%) and service (21%) sectors. On average, leaders' organizational tenure was 12.3 years (*SD* = 7.9) with an average management experience of 11.6 years (*SD* = 8.9). Followers' organizational tenure was 6.5 years on average (*SD* = 6.5; 4% missing). The majority of followers indicated 6 to 30 minutes of daily interaction time with the leader (52.8%, 3 missing).

Leaders were invited via e-mail and informed about the study purpose and procedure. If leaders did not respond to the invitation, one or two follow-up e-mails were sent. Anonymous and voluntary participation were assured. Leaders generated a team code, which they passed

[1] Employees who participated at one point of measurement did not differ from those who participated at both points of measurement on the variables of interest (i.e., authentic leadership, WFE, WFC, and psychological well-being).

along to the followers, together with a link to the online survey. Followers entered the team code and generated a personal code at the beginning of the survey. Team codes were used to match data from followers and leaders. Personal codes served to match follower data from the first and second points of measurement. As an incentive for participation, we offered leaders the opportunity to obtain reports of their results. Approximately half of the participating leaders requested a short oral presentation of their results. All other leaders received information about their results via e-mail or telephone.

Measures

Authentic leadership. Authentic leadership was measured with 14 items ($\alpha = .87$) from the German version (Hörner, Weisweiler, & Braun, 2015) of the Authentic Leadership Inventory (Neider & Schriesheim, 2011) with four subscales: (1) self-awareness (e.g., "My supervisor knows when it is time to re-evaluate his or her positions on important issues"), (2) relational transparency (e.g., "My supervisor says exactly what he or she means"), (3) internalized moral perspective (e.g., "My supervisor makes difficult decisions based on high standards of ethical conduct"), (4) balanced processing (e.g., "My supervisor listens carefully to different points of view before coming to conclusions"). Followers rated authentic leadership on a 5-point Likert scale using anchors ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). For subsequent analyses, we used individuals' perceptions and teams' shared perceptions of authentic leadership. We drew data from individual entities (followers) for both constructs. For individuals' perceptions of authentic leadership, the level of measurement and the level of analysis were the same. For teams' shared perceptions of authentic leadership, individual-level follower ratings were aggregated. We created a consensus measure with composition-based aggregation (Chen et al., 2004; Kozlowski et al., 2016).

WFC. WFC was measured with the nine items (α = .89) from the German translation (Pangert, Schiml, & Schüpbach, 2015) of the Work-Family Conflict Scale (Carlson et al., 2000), covering conflict in terms of (1) time (e.g., "My work keeps me from my family activities more than I would like"), (2) strain (e.g., "Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy"), and (3) behavior (e.g., "The problem solving behaviors I use in my job are not effective in resolving problems at home"). Leaders and followers rated their WFC on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). For followers' WFC, the level of measurement and the level of analysis are both at the individual level. For leaders' WFC, the level of measurement and the level of analysis were both at the team level. This is the case because we conceptualize leaders' WFC as a top-down process with the capacity to "shape and constrain lower level phenomena that are embedded or nested in the higher level context" (Kozlowski et al., 2016, p. 5). Our measurement of leaders' WFC aligned with the suggestion by Chen et al. (2004) that researchers "can elect to measure aggregate-level constructs directly by using global measures" (p. 279).

WFE. We assessed WFE with the nine items (α = .95) from the German translation (Pangert et al., 2015) of the Work-Family Enrichment Scale (Carlson et al., 2006), covering enrichment in terms of (1) competence development (e.g., "My involvement in my work helps me to acquire skills and this helps me be a better family member"), (2) positive affect (e.g., "My involvement in my work puts me in a good mood and this helps me be a better family member"), and (3) psychological resources (e.g., "My involvement in my work helps me to feel personally fulfilled and this helps me be a better family member"). Leaders and followers rated their WFE on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). For followers'

WFE, the level of measurement and the level of analysis were both at the individual level. For leaders' WFE, the level of measurement and the level of analysis were both at the team level.

Control variables. We introduced variables that were interrelated with our outcome variables as control variables. In relation to followers' WFC, we controlled for the number of years that they had been working under their respective leaders. In relation to followers' WFE, we introduced followers' daily interaction time with their leaders as a control variable (i.e., values 1 (between 0 and 5 minutes), 2 (between 6 and 15 minutes), 3 (between 16 and 30 minutes), 4 (between 31 and 60 Minutes), 5 (between 1 and 2 hours), and 6 (more than 2 hours)).

Furthermore, for both outcome variables, we controlled for leaders' psychological well-being from the first point of measurement and followers' psychological well-being from the second point of measurement. Authentic leadership and psychological well-being are likely positively related to both leaders and followers (Avolio & Gardner, 2005; Ilies et al., 2005; Toor & Ofori, 2009). Thus, to analyze the unique relationships between authentic leadership and followers' WFC and WFE, we parsed out variance explained by leaders' and followers' general psychological well-being. Psychological well-being was assessed with 28 items ($\alpha = .90$) from the Psychological Well-Being Scale (Ryff et al., 2012), covering four of seven subscales: (1) autonomy (e.g., "I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people"), (2) self-acceptance (e.g., "In general, I feel confident and positive about myself"), (3) purpose in life (e.g., "I have a sense of direction and purpose in life"), and (4) positive relations with others (e.g., "I know that I can trust my friends, and they know they can trust me"). Item translations into German were based on a previous version of the scale (Staudinger, 1990) and complemented with a standard procedure of translation and independent

back-translation (Brislin, 1970). Leaders and followers rated their well-being on a 5-point Likert using anchors ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

The means, standard deviations, and correlations of measures at individual and team levels are reported in Table 1.

Insert Table 1 about here

Levels of Analysis and Analytic Strategy

Kozlowski et al. (2016) portrayed emergent phenomena in organizational research as "a fundamental dynamic process in multilevel theory" (p. 3), which needs more careful addressing in theory and analysis. The focal units of our research were the individual and the team. The authors further elaborated on two reciprocal forces that "cut across the levels of organizations in multilevel theory" (Kozlowski et al., 2016, p. 5), emergent bottom-up processes and contextual top-down structures. Both forces were conceptualized in our multilevel model. First, we were interested in individuals' perceptions of authentic leadership, which we theorized and analyzed as an individual-level variable. Second, we looked at teams' shared perceptions of authentic leadership. This variable represented the emergent bottom-up construct in our model. Through this distinction between authentic leadership at different levels we also concurred with the differentiation between individual-level social support resources and macro resources in the WH-R model (ten Brummelhuis & Bakker, 2012). Following a consensus model (Chen et al., 2004), we aggregated lower-level measures (i.e., individuals' perceptions of authentic leadership) into a higher-level construct (i.e., teams' shared perceptions of authentic leadership). In line with Mathieu et al.'s (2014) description of the team profile model, "each member's characteristics contribute to a distributional feature that is indexed at the team level [i.e., teams' shared

perceptions of authentic leadership]" (p. 139). We thereby implicitly assumed that all team member perceptions of authentic leadership must be treated equally in how they are integrated into one index. Recent theory and findings support the relevance of collective elements in authentic leadership perceptions (Steffens et al., 2016; Yammarino et al., 2008). Third, we considered leaders' WFC and WFE as the contextual top-down structures in our model. Kozlowski et al. (2016) described these types of constructs as "top-down processes that shape and constrain lower level phenomena that are embedded or nested in the higher level context" (i.e., leaders' WFC and WFE shaping the relationships between authentic leadership and followers' WFC and WFE). These higher-level constructs were theorized and measured directly at the team level (i.e., with global measures of leaders' own perceptions of their WFC and WFE).

In subsequent analyses, we distinguished between statistical relationships hypothesized to occur within teams (Level-1) and between teams (Level-2). Literature recommends centering in multilevel analyses, especially for interaction terms (Enders & Tofighi, 2007; Hox, 2002). Level-2 variables were centered around the grand mean and hence coefficients should be interpreted relative to the average score across teams. Level-1 variables were centered around the group mean for "a 'pure' estimate of the pooled within cluster (i.e. Level 1) regression coefficient" (Enders & Tofighi, 2007, p. 128). For the interpretation of cross-level interactions, group-mean centering "yields a pure estimate of the moderating influence that a Level 2 predictor exerts on the Level 1 association between X and Y and cannot be distorted by the presence of an interaction that involves the cluster means of X" (Enders & Tofighi, 2007, p. 133).

We analyzed both the proposed direct and moderation relationships for the two dependent variables separately. Following recommendations by Podsakoff and colleagues (Podsakoff et al., 2012; Podsakoff, McKenzie, Podsakoff, & Lee, 2003), we used the independent variable from

the first point of measurement and the dependent variable from the second point of measurement. The moderator variables (i.e., leaders' WFC and WFE) were assessed at the first point of measurement as well. For each dependent variable (i.e., followers' WFC or WFE), we first examined its relation to the independent variable at both levels of analysis (i.e., authentic leadership at Level-1 and Level-2), while introducing respective control variables (i.e., leaders' and followers' well-being, followers' time working under the leader, and daily interaction time) as indicated. In a second step, we added the moderator variable (leaders' WFC or WFE) and a cross-level interaction term with authentic leadership. We used a maximum likelihood approach with robust standard errors. We conducted analyses with the statistical software package HLM 7.

Results

Confirmatory Factor Analysis

Confirmatory factor analyses (CFA) were conducted to test the factor structure of the authentic leadership measure and the overall measurement model. We used Mplus (Muthén & Muthén, 1998-2012) with a maximum likelihood estimator and robust standard errors. We report exact model fit (χ^2), degrees of freedom, the probability value, and two approximate fit indices (CFI, RMSEA). Fit indices should not be used as golden rules, but to compare different models (Nye & Drasgow, 2011). However, according to rules of thumb, RMSEA should be equal or lower than .06 and CFI greater than .90 (Nye & Drasgow 2011; Hu & Bentler 1998, 1999).

Authentic leadership measure. To test our measure of authentic leadership in line with its conceptualization as a higher-order construct (Walumbwa et al., 2008), we followed the recommendations of Crede and Harms (2015). Applying a CFA for nested data, we compared three models: A single-factor model, where all 14 items loaded on one single factor, an oblique

first-order model, where all items loaded on their respective factors, and a higher order model, where all items loaded on their respective factors that in turn loaded on a higher order latent authentic leadership factor. Compared to the single-factor model ($\chi^2(77,128) = 182.455$, $p < .001$, RMSEA = .103, CFI = .710), the results indicate better fit for the first-order ($\chi^2(71,128) = 136.602$, $p < .001$, RMSEA = .085, CFI = .819; χ^2diff= 41.032, $p < .001$) and the second-order models ($\chi^2(73,128) = 141.016$, $p < .001$, RMSEA = .085, CFI = .813; χ^2diff= 34.875, $p < .01$). Furthermore, results did not indicate significant differences between the first-order and the second-order model (χ^2diff= 4.403, $p > .05$). The higher-order model aligned with previous views and findings (Neider & Schriesheim, 2011; Walumbwa et al., 2008) as well as with our theoretical conceptualization. A recently published study addressed the question of whether authentic leadership should be conceptualized as a component or a higher order construct in detail (Steffens et al., 2016). The authors demonstrated that there was stronger overall support for the conceptualization of authentic leadership as a global construct. Moreover, our results suggest that compared to the first-order model, the higher-order model was not an inferior representation of our data, and resulted in a better fit than the single-factor model. The higher-order model best represented our theoretical derivation of our hypotheses. Hence, we analyzed authentic leadership as a higher-order construct.

Measurement model. To ensure that the measures we assessed from followers at the second point of measurement (WFC, WFE, and well-being) represented different constructs, we followed the recommendations of Brown (2006) and conducted a series of CFAs, considering the potential effect of an unmeasured latent method variable (Richardson, Simmering, & Sturnam, 2009). We compared four a priori models: A one-factor model, where all items loaded on one common factor, a three-factor model, where we differentiated between WFE, WFC, and well-

being, a six-factor model, in which the four subscales of well-being that we assessed (i.e. self-acceptance, positive relations with others, purpose in life, autonomy) were introduced as separated factors, and a seven-factor model, in which all reverse coded items were further constrained to cross-load on an unmeasured latent method factor.

In comparing the one-factor model ($\chi^2(989,128) = 3020.804$, $p < .001$, RMSEA = .128, CFI = .373) to the three-factor model ($\chi^2(968,128) = 1931.531$, $p < .001$, RMSEA = .087, CFI = .708) to the six-factor model ($\chi^2(974,128) = 1759.867$, $p < .001$, RMSEA = .079, CFI = .757), the results indicate that, overall, the six-factor model is the best fit with the observed data ($\chi^2\text{diff}_1 = 628.495$, $p < .001$; $\chi^2\text{diff}_2 = 125.622$, $p < .001$). Furthermore, the comparison between the six-factor model to the seven-factor model (including an unmeasured latent factor) revealed a better model fit for the seven-factor model ($\chi^2(961,128) = 1660.100$, $p < .001$, RMSEA = .075, CFI = .784; $\chi^2\text{diff} = 81.723$, $p < .001$). Results suggest that an unmeasured latent method factor, consisting of reversed coded items, influenced our data. Yet, reversed coded items were only part of the well-being measure, not our outcome variables. Furthermore, the theoretically derived six-factor model demonstrated a noticeably better representation of our data than a one-factor model, and was only slightly inferior to the seven-factor model. Hence, the six-factor model provides meaningful information.

Aggregation

Our model comprised two types of measurement of team-level constructs (Chen et al., 2004). Leaders' WFC and WFE were directly assessed at the team level, using a global measure (i.e., leaders' ratings of their own WFC and WFE), and hence did not require subsequent aggregation. Teams' shared perceptions of authentic leadership were measured at the individual level (i.e., followers' individual perceptions of authentic leadership), and were subsequently

aggregated to the team level following a composition principle of aggregation where the "lower-level entity implicitly and equally contributes to the higher-level index in a fairly straightforward manner" (Mathieu & Chen, 2011, p. 618).

To support aggregation, we calculated $r_{wg(J)}$ (James, Demaree, & Wolf, 1984), intraclass correlations (ICC) as measures of agreement within teams and F-tests to indicate whether average perceptions of leadership differed significantly across teams. To account for potential biases in raters' judgments, we followed the recommendations of LeBreton and Senter (2007) and applied three different distributions (i.e., uniform, slightly skewed, and moderately skewed). The application of a uniform distribution yielded no out-of-range values, while the slightly skewed distribution revealed one out-of-range value and the moderately skewed distribution revealed nine out-of-range values. We used the uniform distribution with a minimum standard of .51 as the cutoff-value, indicating moderate agreement. The average $r_{wg(j)}$ within teams was .95, indicating very strong agreement. The average $r_{wg(j)}$ of 32 teams ranged from .91 to .99, with one value of .58, indicating moderate agreement. The ICC was .31, $F(32, 95) = 2.337$, $p < .005$. Overall, the results supported the aggregation of teams' shared perceptions of authentic leadership.

Hypothesis Testing

We predicted that individual perceptions of authentic leadership would be negatively related to followers' WFC (Hypothesis 1a) and positively related to followers' WFE (Hypothesis 2a). Further, we predicted that team perceptions of authentic leadership would be negatively related to followers' WFC (Hypothesis 1b) and positively related to followers' WFE (Hypothesis 2b). Calculation of null models revealed that team membership accounted for 0.0% of the variance ($\chi^2(32) = 30.38$, $p > .50$) in followers' WFC, and for 1.2% of variance ($\chi^2(32) = 31.39$,

$p > .50$) in followers' WFE. Team membership explains only a small amount of the total variance in WFC and WFE, however, hierarchical linear modeling accounts for the nested structure of our data and the predicted cross-level interactions.

After calculation of null models, we next analyzed the relations between individual perceptions (Level-1) as well as team perceptions (Level-2) of authentic leadership while controlling for the below-stated variables in a single equation for each outcome variable. Regarding Hypothesis 1a, authentic leadership at Level-1 was negatively related to followers' WFC ($\gamma_{20} = -.53$, $p < .01$), while controlling for leaders' well-being ($\gamma_{01} = -.23$, $p = .10$), followers' well-being ($\gamma_{30} = -.46$, $p < .01$), and followers' time working under the leader ($\gamma_{10} = -.01$, $p = .34$). With regard to Hypothesis 1b, authentic leadership at Level-2 was not significantly related to followers' WFC ($\gamma_{02} = -.23$, $p = .10$)[2]. Hence, Hypothesis 1a was supported, while Hypothesis 1b was not supported by our data.

Regarding Hypotheses 2a and 2b, individual perceptions of authentic leadership (Level-1, $\gamma_{20} = .78$, $p < .005$) as well as team perceptions of authentic leadership (Level-2, $\gamma_{02} = .91$, $p < .001$) were positively related to followers' WFE while controlling for leaders' well-being ($\gamma_{01} = -.24$, $p = .09$), followers' well-being ($\gamma_{30} = .42$, $p < .05$), and daily interaction time with the leader ($\gamma_{10} = .02$, $p = .80$)[3]. Hence, Hypotheses 2a and 2b were supported by our data.

For Hypotheses 3 and 4, we tested whether leaders' WFC and WFE would moderate the respective relations between authentic leadership and followers' WFC and WFE. Hypothesis 3 suggested that decreased levels of leaders' WFC would strengthen the negative relationship

[2] As recommended by Becker, Atinc, Breaugh, Carlson, and Edwards (2016), we also conducted our analysis without control variables, obtaining a similar pattern of results. Individual perceptions of authentic leadership (Level-1, $\gamma_{10} = -.64$, $p < .001$) and team perceptions of authentic leadership (Level-2, $\gamma_{01} = -.29$, $p < .05$) were negatively related to followers' WFC.

[3] Analysis without control variables yielded the same pattern of results. Individual perceptions of authentic leadership (Level-1, $\gamma_{10} = .86$, $p < .001$) and team perceptions of authentic leadership (Level-2, $\gamma_{01} = .84$, $p < .001$) were positively related to followers' WFE.

between authentic leadership and followers' WFC. In a single equation, we introduced authentic leadership (Level-1 and Level-2) and the control variables. Leaders' WFC was introduced in the same equation separately as well as in an interaction term with authentic leadership at Level-1.

Confirming the stated findings above, authentic leadership at Level-1 was negatively related to followers' WFC (γ_{20} = -.53, p < .001), while authentic leadership at Level-2 was unrelated to followers' WFC (γ_{03} = -.24, p = .09). Furthermore, the cross-level interaction of authentic leadership and leaders' WFC was significant (γ_{21} = .50, p < .05).[4] Simple slope tests revealed a strong negative relation between individual perceptions of authentic leadership and followers' WFC for decreased levels of leaders' WFC (γ = −.79, SE = .23, p < .005), and no relationship between authentic leadership and followers' WFC for increased levels of leaders' WFC (γ = −.26, SE = .21, p = .242). Thus, Hypothesis 3 was supported by our data.

A plot of the interaction is displayed in Figure 2.

Insert Figure 2 about here

Hypothesis 4 proposed that leaders' WFE would strengthen the positive relationship between authentic leadership and followers' WFE. Again, we applied a single equation with authentic leadership (Level-1 and Level-2), control variables, leaders' WFE and the interaction term between authentic leadership and leaders' WFE at Level-1. Confirming the above stated findings, individual perceptions of authentic leadership (γ_{20} = .74, p < .005) as well as team perceptions of authentic leadership (γ_{03} = .84, p < .001) were positively related to followers' WFE. However, we did not find the proposed cross-level interaction (γ_{21} = -.33, p = .33). Hence, Hypothesis 4 was not supported by our data.

[4] In an analysis without control variables, the cross-level interaction did not reach significance (γ_{11} = .32, p = .21.)

Results of multilevel models for Hypothesis 1 to 4 are shown in Table 2.[5]

Insert Table 2 about here

Discussion

Our research set out to advance the current understanding of authentic leadership at the work-family interface. We were seeking to further extend multilevel approaches to authentic leadership (Hannah et al., 2011; Hmieleski et al., 2012; Leroy et al., 2015) in relation to followers' WFC and WFE. Considering authentic leadership from the theoretical perspective of the WH-R model, we conceptualized it as an individual-level social support resource and a team-level macro resource (ten Brummelhuis & Bakker, 2012). We also aimed at extending the current understanding of boundary conditions for authentic leadership (Gardner et al., 2011) by considering leaders' own WFC and WFE as cross-level moderators. Data partly supported our model but also suggested differential relations between the variables of interest.

First, we identified the predicted individual-level relationships between authentic leadership and follower' WFC and WFE. Followers, who perceived their leaders as authentic, indicated lower levels of WFC and higher levels of WFE. These findings support the notion that authentic leadership buffers resource losses and fosters resource gains between work and private life domains (ten Brummelhuis & Bakker, 2012). Second, analyses identified one of the predicted team-level relationships. Teams' shared perceptions of authentic leadership were positively related to followers' WFE, but not to their WFC. These findings fit the interpretation of conflict and enrichment as qualitatively different processes (Gareis et al., 2009; Grzywacz & Bass, 2003; Powell & Greenhaus, 2006). These findings advance our understanding of teams'

[5] Recognizing that the sample size at Level-2 (i.e., teams) of the present study was relatively small we conducted robustness tests, omitting two-respondent teams in the analyses for all hypotheses. Results confirmed our findings.

shared perceptions of authentic leadership beyond previous research (Hannah et al., 2011; Hmieleski et al., 2012; Leroy et al., 2015). Third, data confirms leaders' WFC as a contextual top-down structure with the capacity to "shape and constrain lower level phenomena" (Kozlowski et al., 2016, p. 5). The negative relationship between authentic leadership and followers' WFC increased for low levels of leaders' WFC. High levels of leaders' WFE did not alter the relationship between authentic leadership and followers' WFE. Beyond previous studies (Ilies et al., 2005; Toor & Ofori, 2009; ten Brummelhuis et al., 2014), our results suggest that attention must be paid to leaders' difficulties at the work-family interface (O'Neill et al., 2009).

Theoretical Implications

The findings described above contribute to the authentic leadership literature in several ways. First, they align with increasing numbers of studies indicating the many positive implications of authentic leadership for followers (Banks et al., 2016; Gardner et al., 2011). We complement this picture by shedding light on the relations that authentic leadership has with variables beyond work. Despite myriads of insightful studies, we believe that ours is among the first to provide empirical insights into authentic leadership as a resource for followers in the private life domain. Our findings thus support the notion that authentic leadership relates to followers' attitudes and behaviors beyond bottom line success (Avolio et al., 2004), not only as a buffer of negative outcomes (e.g., burnout, stress; Laschinger, 2014; Laschinger & Fida, 2014), but to promote positive aspects and well-being (Ilies et al., 2005). Hence, our first contribution is that through drawing on the WH-R model, we could test a resource-based multilevel framework of authentic leadership. According to our data, authentic leaders function as individual-level social support resources and team-level macro resources for their followers to buffer followers' WFC and drive their WFE.

Second, this research advanced multilevel perspectives of authentic leadership (Hannah et al., 2011; Hmieleski et al., 2012; Leroy et al., 2015; Yammarino et al., 2008). The strengths of authentic leadership are its emphasis of the collective (Steffens et al., 2016), fostering group outcomes (Banks et al., 2016), and leaders' consistent, value-based actions (Avolio et al., 2004; Avolio & Gardner, 2005). Authentic leadership should fuel perceptual consensus within teams (Kozlowski & Ilgen, 2006). Our results concur with the finding that teams' shared perceptions predict individual-level outcomes beyond individuals' perceptions of authentic leadership (Leroy et al., 2015). In line with the literature of emergent phenomena in organizational research (Chen et al., 2004; Kozlowski et al., 2016), our study differentiates between three core variables in relation to levels of theory and levels of analysis (i.e., individuals' perceptions of authentic leadership theorized and measured at the individual level; teams' shared perceptions of authentic leadership theorized at the team level, measured at the individual level and then aggregated to the team level; leaders' WFC and WFE, theorized and measured at the team level).

Interestingly, we found differential results for WFC and WFE, which partly contradicted the notion that team-level and individual-level authentic leadership generally "differ in structure but not in function" (Hmieleski et al., 2012, p. 1479). While teams' shared perceptions of authentic leadership related positively to followers' WFE, the same was not true for WFC. Followers seem to profit more from their individual relations with leaders than from the team setting when the goal is to prevent WFC. Possibly, to avoid conflict, idiosyncratic interactions with one's leader are more helpful than shared views with colleagues or a certain culture within the team. Leaders may be more likely than co-workers to have the last word if followers need to prioritize private over professional issues momentarily (e.g., taking care of a sick child).

Third, we took leaders' own work-family interface into account (Braun & Peus, 2016; Ilies et al., 2005; O'Neill et al., 2009; Toor & Ofori, 2009). Again, WFC and WFE revealed differential patterns. These findings are compelling given that authentic leadership has been described as a concept that relies on authentic self-expression (Shamir & Eilam, 2005). Only the negative relationship between authentic leadership and followers' WFC increased for low levels of leaders' WFC. Our research identified a boundary condition for authentic leadership at the work-family interface, that is, authentic leaders need to prevent conflicts between their own work and private life domains in order to be a positive resource for their followers.

Limitations and Future Directions

When interpreting our results, readers need to keep several limitations in mind, which at the same time open up new avenues for future research. The first limitation concerns our multilevel model. Given that many previous studies of authentic leadership have failed to address the multilevel perspective explicitly (Yammarino et al., 2008), our research represents an advancement in this regard. However, the comparatively small sample size at the team level of analysis creates a limitation in terms of statistical power. The results for teams' shared perceptions of authentic leadership and leaders' WFC and WFE must be interpreted with caution in this regard. We aimed to address these issues through robustness checks and theoretical considerations regarding statistical power.[6] Nevertheless, future research that replicates our findings with larger samples will strengthen the confidence in our results and generalizability.

[6] For organizational multilevel research, conducting appropriate a priori power analyses is especially challenging due to the complexity in estimating variances. In fact, scholars argued that "the literature that has been developed for power in single-level designs […] cannot be directly translated to multilevel designs" (Scherbaum & Ferreter, 2009, p. 347). They discussed collecting a minimum of 30 units at the team level of analysis with 30 individual-level units respectively, resulting in a total sample of 900. However, this rule of thumb "may lead to high levels of power but is probably excessive for most organizational research" (Scherbaum & Ferreter, 2009, p. 354). Simulation studies provide rough estimates for appropriate sample sizes in multilevel studies. For fixed effects, a team-level sample

Second, we acknowledge that the individual-level variables used in this study were significantly correlated. This pattern of correlations points to issues arising from common method variance which threatens the validity of our results. We aimed at counteracting biased findings by assessing the constructs of interest at two points of measurement and gathering data from two rating sources, leaders and followers (Podsakoff et al., 2003). However, to further reduce common source-common method biases, we recommend a full longitudinal design in which all variables are measured at multiple time points (Kline, 2015). The use of additional rating sources (e.g., spousal ratings) of WFC and WFE will further strengthen the validity of our results. We also recommend that future research incorporates experimental research designs which have been developed and applied in previous studies (Braun & Peus, 2016).

Third, we point to recent debates about the dimensionality of authentic leadership and its conceptualization as a first or higher order construct (Neider & Schriesheim, 2011; Steffens et al., 2016). Concurring with previous recommendations (Banks et al., 2016; Gardner et al., 2011), we agree that better "conceptual distinctions among the AL [authentic leadership] components and developing associated measures that reflect these differences" (Banks et al., 2016, p. 644) will provide an advanced basis to test the relations with outcomes at the work-family interface. While this was not the focus of our research, we aimed at contributing to a better understanding of the construct's factor structure. Our data align with theoretical arguments in favor of a higher order model of authentic leadership, but the less than ideal CFA results also point to possibilities for better model specification. We hope that these insights will inform future research.

Fourth, the much-needed differentiation between authentic leadership and related positive leadership constructs (Banks et al., 2016; Hoch et al., 2016; Meuser et al., 2016) opens up

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size of 30 units has been said to provide sufficient information (Maas & Hox, 2005). Similarly, for cross-level interactions, a minimum of 30 groups at the team level has been recommended (Scherbaum & Ferreter, 2009).

promising avenues for future research at the work-family interface. In the face of construct proliferation in organizational research, a potential lack of conceptual clarity "undermines discriminant validity and inhibits conceptual progress in science" (Podsakoff, MacKenzie, & Podsakoff, 2016, p. 166). We acknowledge a clear shortcoming of our study in this regard, that is, it did not establish authentic leadership's predictive validity relative to other positive leadership styles. Nevertheless, we used theory to embed authentic leadership at the work-family interface based on authentic leaders' unique qualities (e.g., self-knowledge, self-concept clarity, self-transcendent values; Avolio & Gardner, 2005). These qualities match the concepts of resources in the WH-R model (ten Brummelhuis & Bakker, 2012).

We also applaud recent empirical advances in leadership research (Banks et al., 2016; Hoch et al., 2016). Given that variables at the work-family interface are manifold and received too little attention in the leadership literature to date (ten Brummelhuis et al., 2014), predicting these outcomes and unique processes through drawing on different leadership theories in comparison to each other appears to be a fruitful endeavor. Furthermore, Meuser et al. (2016) located authentic leadership (but not ethical or servant leadership) in a leadership and emotions network. These descriptive findings suggest that prior research efforts to integrate authentic leadership theory with theories of leader and follower emotions at work have been initiated successfully. Hence, the links between authentic leadership and emotions are a promising area to build upon for future research. Studies may explore resources and emotions as the unique processes through which authentic leadership functions (Leroy et al., 2015). While for example servant leadership is also concerned with followers' individual needs, personal growth, and well-being (Zhang et al., 2012), the pathways through which these aspects are addressed might be different. Future studies may further consider leaders' self-awareness and regulatory foci (i.e.,

promotion and prevention; Lockwood, Jordan, & Kunda, 2002) as processes specific to authentic leadership. Future research could also explore whether authentic leaders' genuine emotional displays buffer their own as well as followers' resources loss (Gardner et al., 2009).

Fifth, in line with a stronger focus on the specific links between authentic leadership and variables at the work-family interface, we acknowledge that our model captures only part of the variables that are likely to influence followers' WFC and WFE. Omitting relevant variables from measurement models causes concerns regarding potential endogeneity effects (Antonakis, Bendahan, Jacquart, & Lalive, 2010). In the current study, we parsed out variance explained by leaders' and followers' psychological well-being as well as the number of years followers had been working under their respective leaders and their daily interaction time. We recommend that future research include additional theoretically relevant control variables (Atinc, Simmering, & Kroll, 2012; Becker, 2005; Bernerth & Aguinis, 2016). We suggest measuring key resources (e.g., psychological capital), social support resources at work (e.g., family-supportive work environments) and in the private life domain (e.g., support from spouses, relatives, friends). Finally, the inclusion of subsequent outcomes of WFC and WFE will be beneficial for model development. In particular, measures of individual health and well-being such as days of sick leave or indicators of sickness presenteeism would be of interest (Aronsson & Gustafsson, 2005).

Implications for Practice

According to our findings, organizations that seek to promote followers' WFE and prevent WFC should develop authentic leadership. For example, leadership training needs to address factors, which have been shown to precede authentic leadership, such as leaders' self-knowledge and self-consistency (Peus et al., 2012), psychological capital (Jensen & Luthans, 2006), and abilities to champion collective interests (Steffens et al., 2016). Coaching and

mentoring provide opportunities for self-reflection, which in turn advances leadership-related self-views (e.g., leadership self-efficacy, leader self-awareness, leader identity; Day & Dragoni, 2015). Reflecting one's life-story (Shamir & Eilam, 2005) and physical enactment (Weischer, Weibler, & Petersen, 2013) will also foster authentic leadership.

With the aim of tackling health and well-being related issues in organizations, human resource policies and structures (e.g., flextime, telework, childcare facilities, sabbaticals; Allen, 2001; Lapierre & Allen, 2006) can help enhance WFE and reduce WFC. While individuals in management positions appear to be among the most vulnerable targets of WFC, insufficient attention is devoted to their difficulties. We recommend broadening the focus of human resources structures for a better work-life integration for all employees, especially those in managerial positions. Finally, the positive relations between teams' shared perceptions of authentic leadership and followers' WFE suggest that processes in teams inspire successful approaches at the work-family interface. Employees may profit even more from authentic leadership when organizations develop team collaboration and cohesiveness (Chen et al., 2007).

Conclusion

This research sheds light on authentic leadership as a resource at the work-family interface. Authentic leadership relates negatively to followers' WFC and positively to WFE. We also demonstrated the importance of teams' shared perceptions of authentic leadership for followers' WFE and the role of leaders' WFC as a boundary condition. We hope to inspire future work considering authentic leaders' conflicts at the work-family interface as well as shared perceptions of authentic leadership in teams in relation to organizational outcomes.

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Table 1. Means, standard deviations, and correlations of study variables

	M	*SD*	1	2	3	4	5	6	7	8	9
Individual level (Level-1)											
1. Authentic leadership	3.85	.56									
2. Follower's WFC	3.52	.87	-.35 **								
3. Followers' WFE	2.33	.73	.51 **	-.38 **							
4. Followers' well-being	3.99	.46	.31 **	.28 **	-.33 **						
5. Followers' daily interaction time with leader	2.92	1.51	.25 **	.21 *	-.02	.19 *					
6. Followers' time working with the leader	9.30	10.01	-.03	-.06	-.18 *	.06	.04				
Team level (Level-2)											
7. Authentic leadership [a]	3.90	.38	.66 **	.36 **	-.15	.24 **	.25 **	-.06			
8. Leaders' WFC [a]	3.73	.58	-.07	-.08	.08	-.09	-.17	-.25 **	-.10		
9. Leaders' WFE [a]	2.52	.53	.24 **	.19 *	-.05	.28 **	.03	.07	.36 **	-.53 **	
10. Leaders' well-being [a]	4.01	.38	.20 *	.00	-.13	.05	.00	.18 *	.30 **	-.21 *	-.43 **

Note. N = 128 individuals (Level-1) in 33 teams (Level-2). WFC: work-family conflict WFE: work-family enrichment. Variables 1 to 4 and 7 to 10 were measured on 5-point Likert scales. Variable 5 was indicated in ranges: 1 (0 to 5 minutes), 2 (5 to 15 minutes), 3 (16 to 30 minutes), 4 (31 to 60 minutes), 5 (1 to 2 hours), 6 (more than 2 hours). Variable 6 was indicated in years. Correlations for variables 1 to 4 and 7 to 10 calculated with Pearson's r. Correlations for variables 5 and 6 calculated with Spearman's rho.

[a] Variables at the team level were assigned to individuals and correlated at the individual level (rows 7-10). The magnitude of these correlations accurately reflects the relationships at their respective level of analysis. However, due to the nested nature of our data, standard errors are biased, and significance levels should be interpreted cautiously.

* $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed test).

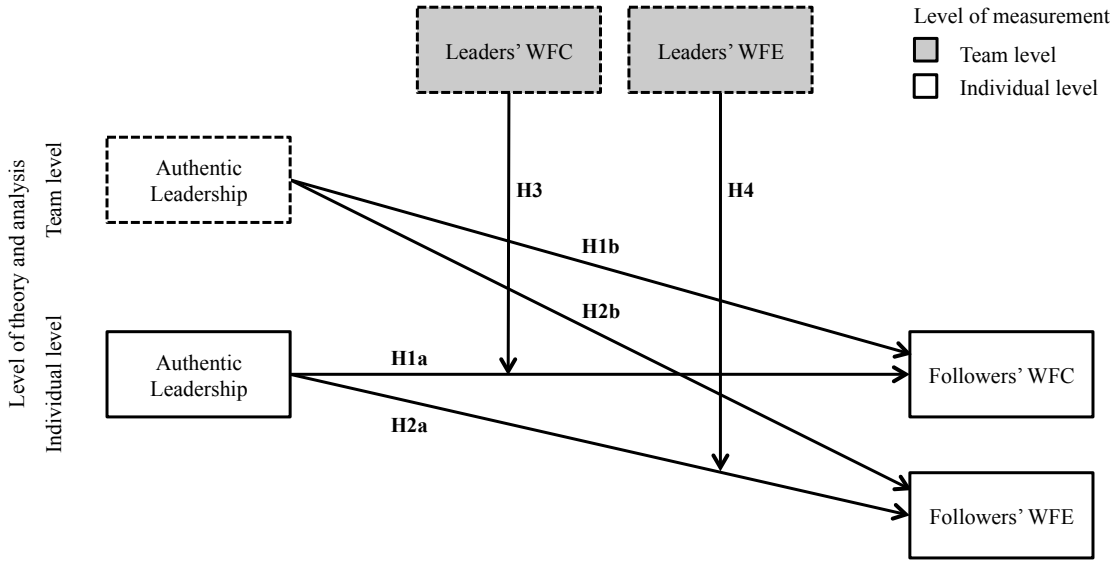
Table 2. Results of multilevel modeling analyses

Outcome	WFC						WFE					
	Nullmodel		**Model 1**		**Model 3**		**Nullmodel**		**Model 2**		**Model 4**	
Constant	2.33***	(0.06)	2.31***	(0.06)	2.31***	(0.06)	3.52***	(0.08)	3.59***	(0.05)	3.59***	(0.05)
Level 1												
Authentic leadership			-0.53**	(0.17)	-0.53***	(0.14)			0.78**	(0.22)	0.74**	(0.23)
Followers' well-being			-0.46**	(0.15)	-0.49**	(0.15)			0.42*	(0.18)	0.44*	(0.18)
Followers' time working with the leader			-0.01	(0.01)	-0.00	(0.01)						
Followers' daily interaction time									0.02	(0.07)	0.02	(0.08)
Level 2												
Authentic leadership			-0.23	(0.14)	-0.24^{+}	(0.14)			0.91***	(0.17)	0.84***	(0.12)
Leaders' well-being			-0.23	(0.14)	-0.16	(0.16)			-0.24^{+}	(0.14)	-0.27	(0.13)
Leaders' WFC					0.05	(0.11)						
Leaders' WFE											0.12	(0.06)
Cross-level interaction (Level-1 x Level-2)												
Authentic leadership x leaders' WFC					0.50*	(0.24)						
Authentic leadership x leaders' WFE											-0.33	(0.33)
Model fits statistics												
Deviance (likelihood)	283.35		240.70		237.75		329.00		262.99		260.53	
Δ Deviance (likelihood)			42.65 ***		2.95				66.01 ***		2.56	
Residual	0.532		0.359		0.348		0.753		0.385		0.377	
Pseudo R^2			0.325		0.031				0.489		0.021	

Note. Level-1: $N = 128$, Level-2: $N = 33$. Standard errors are in parentheses. WFC: work-family conflict. WFE: work-family enrichment. Independent variables, leader variables, time working with the leader and daily interaction time with the leader were assessed at the first point of measurement. Outcome variables and followers' well-being were assessed at the second point of measurement.

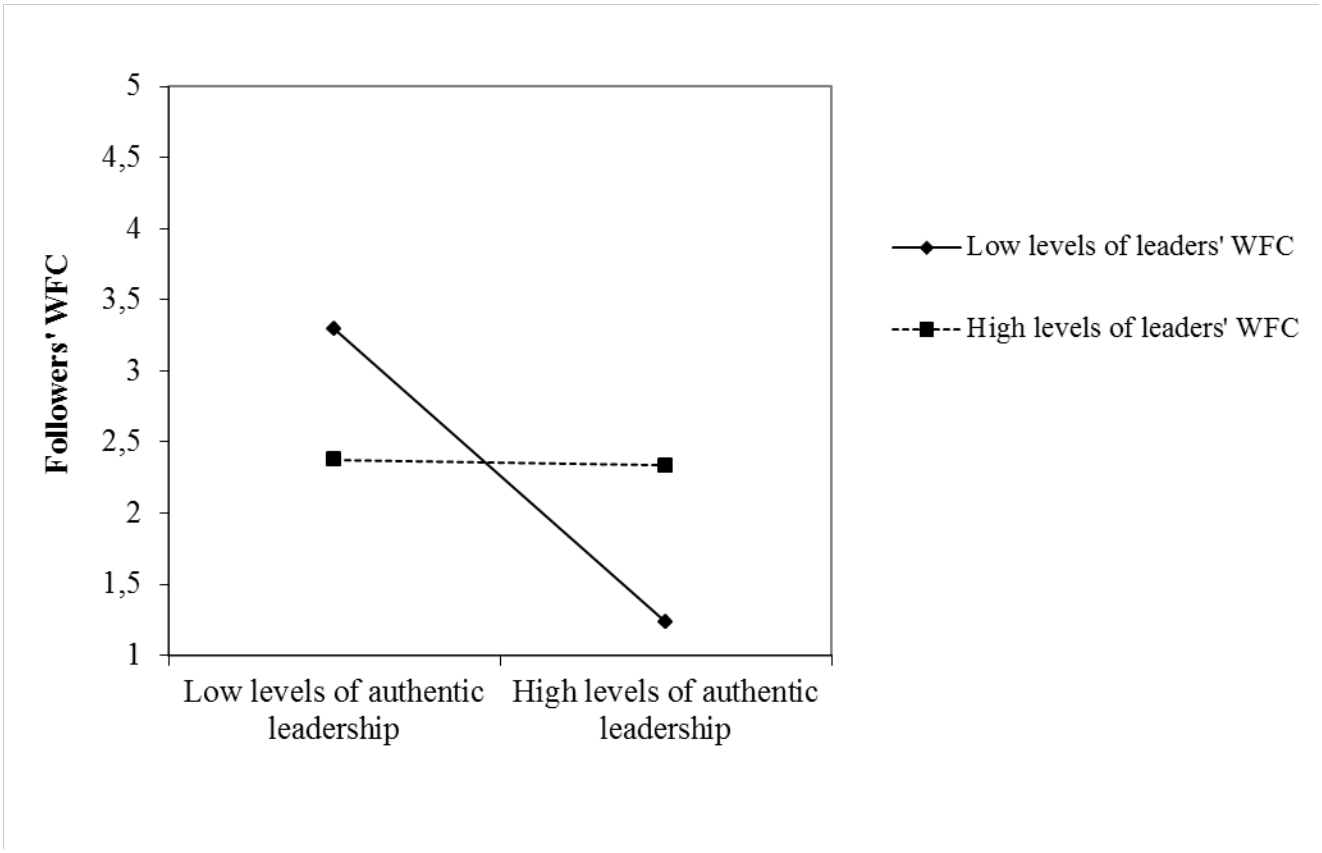
$^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed test).

Figure 1. Multilevel moderation model of authentic leadership, WFC and WFE



Note. WFC: work-family conflict. WFE: work-family enrichment. Solid lines indicate variables conceptualized and analyzed at the individual level. Dashed lines indicate variables conceptualized and analyzed at the team level. The level of measurement is indicated by white boxes for variables measured at the individual level and grey boxes for variables measured at the team level.

Figure 2. Cross-level interaction of authentic leadership and leaders' WFC on followers' WFC



Note. WFC: work-family conflict.